USGS
Department of the Interior
U.S. Geological Survey

NASA

LANDSAT 7 MONTHLY UPDATE

The Landsat 7 Mission, developed by the National Aeronautics and Space Administration, is managed by the U.S. Geological Survey under authority established by Presidential Decision Directive NSTC-3.

Program News

Landsat 7 Program Manager Takes Temporary Assignment

R. J. Thompson, the current Landsat 7 Program Manager, has accepted a four to six month assignment at the U.S. Geological Survey (USGS) Headquarters in Reston, Virginia, beginning in mid-March 2001. He will be assisting the USGS Director in developing a strategic plan defining the role and responsibility of the USGS in U.S. satellite land remote sensing activities. Tracy Zeiler, the current Landsat 7 Mission Manager, will serve as Acting Landsat 7 Program Manager.

Landsat 7 Milestone

On March 2, 2001, at 00:49 Central Daylight Time, Landsat 7 will begin its 10,000th orbit. Since its launch on April 15, 1999, Landsat 7 has acquired over 320,000 scenes; approximately 145,000 scenes for the U.S. archive and approximately 176,000 scenes for the archives of the 14 Landsat 7 international ground stations.

Technical News

Solid State Recorder Status

On February 13, 2001, the Landsat Ground Station at the EROS Data Center reported intermittent occurrences of unmodulated X-band. Investigation by the USGS Flight Operations Team revealed a memory board #12 on the Solid State Recorder had failed. This anomaly is similar in nature to the loss of memory board #23 in November 1999. On February 14, 2001, memory board #12 was removed from service and nominal imaging and recording operations were resumed. At no time during the anomaly were real-time imaging operations affected. The Solid State Recorder is now operating with 22 of the 24 memory boards and at 92 percent of its initial at-launch capacity. Landsat 7 data acquisition mission objectives have not been significantly impacted.

Landsat 7 Duty Cycle

A new and improved ETM+ mid-term duty cycle limitation has been approved by Raytheon Santa Barbara Remote Sensing. The USGS Flight Operations Team is currently modeling the new duty cycle constraint to quantify improvements in the number of scenes that can be acquired. Implementation of the new constraint is still pending the results of the modeling. An increase of about five to six scenes per day is expected

International Ground Station (IGS) Metadata Ingest and Searching in Production

A major milestone for the Landsat 7 Program was met in mid-January 2001 when the Canadian ground stations (PAC and GNC) began transmitting their backlog of International Ground Stations (IGS) scene metadata to the EDC DAAC for ingest and archive. This function is accomplished using an FTP polling server that is now fully operational. The EOS Data Gateway (EDG) client was also enhanced to allow public searching of the IGS holdings via the EDC client. Users who find scenes of interest in an international archive can then be electronically transferred to the corresponding web address for data ordering. This is an important first step in the goal of providing a worldwide catalog inventory of Landsat 7 scenes. Other stations will begin transferring metadata in the next few months.

New Stations Validated for Data Exchange in Support of Quality Validation

In February 2001, the Hatoyama, Japan Ground Station provided the USGS with Level-0Rp data that were successfully processed and validated to be of equivalent quality to the USGS EROS Data Center's Level-0Rp data product. There are now

quality to the USGS EROS Data Center's Level-0Rp data product. There are now five IGS that can exchange data (Raw CC or Level-0Rp) with the USGS (Cordoba, Argentina; Alice Springs, Australia; Beijing, China; Prince Albert, Canada; and Hatoyama, Japan). These five ground stations will now be scheduled for biannual data exchange for data quality validation. Congratulations to you all!

Meetings

Landsat 7 Technical Working Group Meeting #9 Summary

Attending the meeting in Gran Canaria, Spain were 39 participants, representing 14 operational, 3 soon-to-become operational ground stations, 12 International Cooperators and 15 countries. All stations made presentations focusing on the data processing flow from Data Capture to the Archive. Status reports were presented and discussions held on data acquisition priority, data exchange format validation, metadata exchange, and product validation. A sub-working group was established to explore preparing a proposal for Landsat 7 Product Validation. Vince Beruti from European Space Agency (ESA) and Jon Christopherson from the EROS Data Center agreed to co-chair the sub-working group. Meeting participants enjoyed visiting the ESA ground station at Maspalomas and experiencing the fascinating geology, ecology, and other features of Gran Canaria. Our thanks to ESA and INSA (Ingenieria Y Servicios Areospaciales) for hosting the meeting.

LTWG-10 Meeting Scheduled

The next meeting of the Landsat 7 Technical Working Group meeting is scheduled for the week of June 25, 2001 in Sioux Falls, South Dakota. The meeting will be held at the EROS Data Center; ground station reports will features the technical details of the ground station archives and data access systems.

Landsat 7 Science Team Meeting

The final Landsat 7 Science Team meeting is schedule for the week of May 21, 2001 at the Hilton Hawaiian Village in Honolulu, Oahu, Hawaii. The focus of the meeting is on the research results of the team members and on the uses of Landsat 7 for disaster and volcano monitoring applications. A field trip to observe volcano study sites on the "Big Island" is scheduled as part of the meeting.

Landsat Data Continuity Mission (LDCM) Follow-on

There will be an LDCM follow-on workshop all day April 23 and half day on April 24 at the spring ASPRS conference to be held in St. Louis, Missouri. The purpose of the workshop will be to seek public comment on the revised data specification. Please look for further details at the LDCM Web Site: http://LDCM.usgs.gov

Related News

Landsat 4/5 Operations

The USGS and Space Imaging have agreed to discuss issues surrounding continued operation of Landsat 4/5. The USGS will endeavor to support cooperative activities with Space Imaging to ensure continuation of Landsat 4/5 operations as long as possible. Additional information that may impact the current and past Landsat 5 international ground station network will be disseminated as it becomes available.

Product Announcement

Moderate Resolution Imaging Spectrometer (MODIS) and Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) products are now available from the USGS EROS Data Center Distributed Active Archive Center (EDC DAAC). For more information about these products see http://edcdaac.usgs.gov/index.html. For more information about MODIS and ASTER see the following websites: http://modis.gsfc.nasa.gov/MODIS and http://asterweb.jpl.nasa.gov

The Landsat 7 Monthly Update is an informal communication tool, prepared monthly and distributed electronically to USGS Landsat 7 partners, to provide information about Landsat 7 activities and related topics of interest. Comments, corrections, and queries may be directed to David Carneggie at the following email address: carneggie@usgs.gov.